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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/633,806 | 08/04/2003 | YuanQiao Rao | 85018LMB | 7231 |

7590 08/24/2004

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EXAMINER

SCHILLING, RICHARD L

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1752

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633806

Applicant(s)

R90 & tal

Examiner

RL Schilling

Group/Art Unit

1752

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-23 is/are pending in the application.
Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-23 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☒ The drawing(s) filed on _____ is/are accepted ~~objected to~~ by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 8-403
- ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

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1. The status of the copending application cited on page 1 of the specification should be updated.

2. Claim 22 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. The term "support enhanced by at least" in claim 22 is indefinite.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in (1) an application for patent, published under Section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 5-23 are rejected under 35 U.S.C. § 102(b) as being fully met by Christian et al. Christian et al. (see particularly column 6, lines 38-61; column 7, line 48 - column 10, line 47) discloses imaging elements with antistatic layers with swellable clay particles comprising natural clay intercalated or exfoliated with hydrophilic polymers.

4. Claims 1-8 and 10-23 are rejected under 35 U.S.C. § 102(b) as being fully met by Aono. Aono (see particularly column 3, line 30 - column 4, line 25; column 5, lines 8-16; column 23, lines 52-60) disclose imaging elements with layers comprising natural clay particles in hydrophilic polymers, preferably gelatin, which are splayant materials. The clay particles of instant claims 1-8 and 11-23 are not required to be intercalated or exfoliated. Also, the clay particles in Aono are disclosed as exfoliated, i.e. the plates or layers of the clay particles are cleaved into a sol.

5. Claims 1-3, 5, 6 and 9-23 are rejected under 35 U.S.C. § 102(e) as being anticipated by Majumdar et al. '696. The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. § 102(e). This rejection under 35 U.S.C. § 102(e) might be overcome either by a showing under 37 CFR 1.132 that any

invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. Majumdar et al. '696 (see particularly column 2, lines 21-28; column 3, lines 5-27; column 3, line 65 - column 5, line 48; column 10, lines 48-66; column 11, lines 54-65; Example 1) disclose imaging elements with support layers with layers of nanocomposite particles for stiffer supports. The nanocomposite particles include natural clay intercalated and/or exfoliated with splayants. The layers with clay particles may be coated on the top or bottom of a support to increase stiffness.

6. Claims 1-3 and 5-23 are rejected under 35 U.S.C. § 102(e) as being anticipated by Dontula et al. The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. § 102(e). This rejection under 35 U.S.C. § 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. Dontula et al. (see particularly column 4, lines 1-15; column 6, lines 44-57; column 7, line 65 - column 8, line 20; column 9, line 63 - column

10, line 60; column 11, line 44 - column 12, line 15; Example 1) disclose imaging elements with supports comprising layers comprising clay nanocomposite materials of natural clay and splayant including polymers of instant claim 8. Example 1 uses the same nanocomposite clay material as in the Examples of applicants' specification.

7. Claims 1-23 are rejected under 35 U.S.C. § 102(e) as being anticipated by Rao et al. The applied reference has a common assignee and inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. § 102(e). This rejection under 35 U.S.C. § 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. Rao et al. (see particularly column 4, lines 13-60; column 8, line 29 - column 10, line 52; column 11, lines 5-15; Examples 1-12) disclose imaging elements with barrier layers over imaging layers. The barrier layers comprise natural clay particles intercalated and/or exfoliated with hydrophilic polymers. Examples 1-12 use the same nanocomposite clay materials as used in the Examples in applicants' specification.

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8. The prior art submitted by applicants has been considered. Vandenaabeele '709 and Vandenaabeele '705 are cited of interest in the art as disclosing imaging elements comprising clay particles. Majumdar et al. '227 is cited of interest in the art as disclosing imaging elements with antistatic layers comprising clay particles intercalated and/or exfoliated with a polymer.

9. Any inquiry concerning this communication should be directed to Mr. Schilling at telephone number (571) 272-1335.

RLSchilling:cdc

August 20, 2004

RICHARD L. SCHILLING
PRIMARY EXAMINER
GROUP 1400 1752

